Abstract

Provided is a method for manufacturing a glass optical element having at least one concave surface, comprising the following steps: softening a glass molding material by heating, molding the softened material with a first mold having a first molding surface and a second mold having a second molding surface by applying a pressure, the first molding surface comprising a first concave surface, the second molding surface comprising a convex surface, planar surface or second concave surface, the second concave surface having a curvature radius greater than that of said first concave surface, whereby shapes of the first molding surface and the second molding surface are transferred to the material, cooling the material so that a temperature of the material reaches a temperature equal to or lower than glass transition temperature (Tg), and removing the cooled material from either of said first mold or said second mold. In the method, a second temperature of said second mold reaches the glass transition temperature prior to a time when a first temperature of said first mold reaches the glass transition temperature in the cooling step.